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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,959	05/24/2000	David I. Durst	TDT-207	6121

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EXAMINER

GURSHMAN, GRIGORY

ART UNIT

PAPER NUMBER

2132

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/577,959

Applicant(s)

DURST ET AL.

Examiner

Grigory Gurshman

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/16/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The formal drawings filed on 16/08/2004 are accepted by examiner.

Response to Arguments

2. Rejections of claims 1, 9 and 12 under U.S.C 112 (second paragraph) have been overcome by the Applicant's amendment of the instant claims.
3. Applicant's amendments to claims 1, 6, 8, 9, 12, 14, 18 - 22, 24 and 29 are addressed in the rejections herein.
4. New claims 31 - 34 are addressed in the rejections herein.
5. Referring to claims 1, 8, 9 and 12, Applicant argues that the instant claims recite that state of the anisotropic optical property is retained through the transfer, which distinguishes the instant claims from the Kamiyama reference. Examiner respectfully disagrees and points out that Kamiyama teaches applying the layer of the substrate (2 in Fig.2), which has the anisotropic properties. The anisotropic properties remain unchanged through the application of the substrate. Therefore, claims 1-13 are anticipated by Kamiyama as explained in the rejection herein.
6. Referring to claims 18-21, Applicant argues that the instant claims are distinguished from the combination of Kamiyama and Walters by the requirement for hashing of the identifications of the random optically readable characteristics. With respect to this argument examiner points out that Walters teaches pattern being encoded in an identifying value and the disc is marked with the identifying value to

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distinguish the disc from other discs (see column 1, lines 25-35). Walters also teaches authenticating the disc based on the pattern (see Fig. 9). Examiner points out that hashing and encoding of optical readable characteristics would have been view as the same process by one of ordinary skill in the art.

7. Referring to claims 14-17 and 22-30, Applicant argues that neither Walters nor Edwards suggest the use of a fluorescent pattern. Examiner points out that reading of any pattern by means of anisotropic properties involves passing the light of a particular wavelength through the pattern which is explicitly taught by both Walters and Edwards. The fluorescent light is just a light of a particular wave length taught by art of record.

With regard to the instant claims, Applicant further argues that Walters and Edwards do not teach non-deterministic data pattern separate from the data pattern. Examiner respectfully disagrees and point out that Walters explicitly teaches the pattern of damage, which is different and separate from the data pattern.

8. Referring to claim 29, Applicant argues that authentication tape recited in the clam 29 is not taught in the prior art of record. Examiner respectfully disagrees and points out that, Kamiyama shows two different substrates one of which creates a recording layer that is applied on the layer of the disc substrate (see column 3, lines 59-68), which meets the limitation "sealing tape" recited in the claim 29.

Claim Rejections - 35 USC § 112

9. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-3, 6, 8, 9, 12 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamiyama (U.S. Patent No. 6,043,940).

Referring to the instant claims, Kamiyama discloses an optical system for optical recording (see title). Kamiyama teaches optical head used for recording and reproducing information in magneto-optical disc, DVD-RAM (see column 1, lines 5-10).

The limitation "recording medium, having anisotropic optical domains" is met by the disc D in Figs. 1 and 2. The lens (4) and the substrate (2) have anisotropic optical properties. The limitation "transferring a portion of the recording medium to a carrier, wherein ... a portion of the recording medium has ... detectable anisotropic optical properties" is met by the disc in Fig., 2 consisting of the two substrate layers (1 and 2).

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The layer 2 is a recording layer that is applied on the layer of the disc substrate (see column 3, lines 59-68), having its anisotropic properties unchanged, which meets the limitation "maintaining a state of the anisotropic optical domains".

12. Referring to claim 2, Kamiyama teaches the use of recording medium comprising the polymers such as silicon nitride (see column 3, lines 63), which has crystalline and anisotropic properties.

13. Referring to claims 3 and 6, Kamiyama shows the use of two different substrates with different anisotropic properties.

14. Referring to claim 29, Kamiyama shows two different substrates one of which creates a recording layer that is applied on the layer of the disc substrate (see column 3, lines 59-68), which meets the limitation "sealing tape" recited in the claim 29.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 4, 5, 7, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama (U.S. Patent No. 6,043,940) in view of Li (U.S. Patent No. 5,549,953).

10. Referring to the instant claims, Kamiyama discloses an optical system for optical recording (see title). Kamiyama teaches optical head used for recording and reproducing information in magneto-optical disc, DVD-RAM (see column 1, lines 5-10).

Kamiyama, however, does not explicitly teach recording medium transferred in the pattern defined by a cipher.

17. Referring to the instant claims, Li discloses an optical recording media having optically variable security properties (see abstract and Fig.1). In Fig. 26 Li show the pattern applied to the recording medium. Li teaches that the position of the reflection peaks (i.e. pattern) depends on the phase thickness, which is given by equation 1 (see column 6). Equation produces a cipher, which defines the pattern on the recording medium. Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to transfer the pattern on the recording medium of Kamiyama wherein the pattern is defined by the cipher as taught in Li. One of ordinary skill in the art would have been motivated to transfer the pattern on the recording medium wherein the pattern is defined by the cipher as taught in Li for positioning the reflectance peaks to obtain the desired color (see Li column 6, lines 36-40).

18. Referring to claim 7, Li teaches composition of reflective materials on the recording medium, which meets the limitation "fluorescent dye composition".

19. Referring to claim 13, it is well known in the art to imprint the message identifying the object on the carrier. For example the copy protection of the optical discs is done by imprinting the special data on the disc.

20. Claims 10, 11, 18 -21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama (U.S. Patent No. 6,043,940) in view of Waters (U.S. Patent No. 5,572,589).

21. Referring to the instant claims, Kamiyama discloses an optical system for optical recording (see title). Kamiyama teaches optical head used for recording and reproducing information in magneto-optical disc, DVD-RAM (see column 1, lines 5-10). Kamiyama, however, does not explicitly teach defining the pattern of the recording media on the carrier and authenticating the carrier based on the detected pattern.

Referring to the instant claims, Waters discloses a method for minimizing counterfeiting of CD-ROMs and authenticating users of CD-ROMs. In accordance with the first aspect of the present invention, a method of serializing a disc involves physically damaging a portion of the disc to create a pattern of damage. The pattern of damage is encoded in an identifying value and the disc is marked with the identifying value to distinguish the disc from other discs (see column 1, lines 25-35). Walters also teaches authenticating the disc based on the pattern (see Fig. 9). Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to authenticate the optical disc of Kamiyama based on the detected pattern as taught in Waters. One of ordinary skill in the art would have been motivated to authenticate the optical disc based on the detected pattern as taught in Waters for minimizing counterfeiting of CD-ROMs (see Waters, column 1, lines 20-25). Further more, it would have been obvious to save the data about the pattern in the database for comparing the patterns in the process of authentication.

22. Referring to claims 18-21, Walters explicitly teaches a data pattern molded on the surface of the substrate, having a set of defects (see column 1, lines 25-35). The limitation "hash of identifications of the random optically readable characteristics" is met by Walters teaching that pattern of damage is encoded in an identifying value and the disc is marked with the identifying value to distinguish the disc from other discs (see column 1, lines 25-35). Walters and Kamiyama teach that optically readable characteristics are adapted to be readable by a common imaging system.

23. Claims 14 -17 and 22- 28, 30, 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waters (U.S. Patent No. 5,572,589) in view of Edwards (U.S. Patent No. 5,398,226).

24. Referring to the instant claims Waters discloses a method for minimizing counterfeiting of CD-ROMs and authenticating users of CD-ROMs. In accordance with the first aspect of the present invention, a method of serializing a disc involves physically damaging a portion of the disc to create a pattern of damage. The pattern of damage is encoded in an identifying value and the disc is marked with the identifying value to distinguish the disc from other discs (see column 1, lines 25-35). Walters also teaches authenticating the disc based on the correspondence of the pattern (see Fig. 9). Walters also does not teach extracting dichroic element pattern for authentication of a medium.

Referring to the instant claims, Edwards discloses imaging tracking system for tracking optical media using a two wavelength optical head (see abstract and Fig.10). Edwards teaches the use of dichroic filter 92 (in Fig. 10). The extracted dichroic pattern is shown in Fig. 11. The pattern of tracking image 100 is shown in FIG. 9 by a representative tracking image pattern comprised of a plurality of data marks 108 corresponding to grooves or tracks 38 or other data features, imaged by the light path. Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to authenticate a disc of Waters by extracting dichroic pattern by the imaging sensor from the optical disc as taught in Edwards. One of ordinary skill in the art would have been motivated to authenticate a disc by extracting dichroic pattern by the imaging sensor from the optical disc as taught in Edwards for providing track location verification data (see Edwards, column 2, lines 35-40).

15. Claim 31 is rejected on the same grounds as claim 14.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Grigory Gurshman whose telephone number is (571)272-3803. The examiner can normally be reached on 9 AM-5:30 PM.

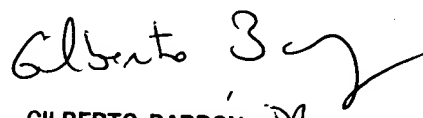
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571)272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GG



Grigory Gurshman
Examiner
Art Unit 2132



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